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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Tomoaki Masuda

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WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP
1250 CONNECTICUT AVENUE, NW
SUITE 700
WASHINGTON, DC 20036

EXAMINER

DI GRAZIO, JEANNE A

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 11/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/006,790

Applicant(s)

MASUDA ET AL.

Examiner

Jeanne A. Di Grazio

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-20 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

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DETAILED ACTION

Claims

Claims 1-20 are pending. Claims 1, 7-10 and 14 have been amended per Applicant's Amendment of September 8, 2005. Claims 17-20 are newly added per said Amendment.

Priority

Priority is not claimed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-10 and 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent 5,543,948 (to Takahashi et al.) in view of Japanese Patent Application 05-086211 (to Matsui et al.).

As to claim 1 (amended), Takahashi teaches and discloses a thermoplastic saturated norbornene resin phase plate for liquid crystal displays and the like in which a thermoplastic saturated norbornene resin sheet is stretched and oriented (Abstract, entire patent, Column 3, Lines 65-67 and Column 4, Lines 3-4). Several layers become laminated (Column 5, Lines 48-51) and an adhesive, such as an acrylic adhesive is used for the lamination (Id. at Lines 52-65). Several layers are laminated, thus, it may be presumed that the adhesive has an adhesive property on its both surfaces.

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Takahashi does not appear to explicitly specify the adhesive strength between the adhesive and the stretched norbornene resin sheet.

However, Matsui teaches and discloses a bonding of a thermoplastic norbornene resin with respect to an adhesive (Entire Application but see also “Effect of the Invention” at page 5 of 5 of the machine translation at [0042]). Matsui states that the adhesive strength between the thermoplastic norbornene resin and adhesive layer is strong and as such Matsui obtains a good adhesive property. (Id.).

Matsui is evidence that ordinary workers in the field of liquid crystals would have found the reason, suggestion and motivation to maximize and optimize the bonding strength (or adhesive force) between a norbornene resin sheet and an adhesive layer for good adhesive properties especially if the laminate is to be used in the context of liquid crystal displays or polarizers where optical evenness becomes critical.

Therefore, it would have been obvious to one of ordinary skill in the art of liquid crystals at the time the invention was made to modify Takahashi in view of Matsui for good adhesive properties especially if the laminate is to be used in the context of liquid crystal displays or polarizers where optical evenness becomes critical.

Thus, claim 1 is rejected.

As to claim 2, the limitation “wherein the norbornene-based resin film is subjected to a surface treatment and the adhesive layer is provided thereon” is a product-by-process limitation and is not considered.

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Patentability does not rest merely upon the process by which the optical compensating film is made. Rather it must be the optical compensating film itself that is new, useful and not obvious.

Thus, claim 2 is rejected.

As to claim 3, the limitation “wherein the surface treatment is a corona discharge treatment” is a product-by-process limitation and is not considered.

Patentability does not rest merely upon the process by which the optical compensating film is made. Rather it must be the optical compensating film itself that is new, useful and not obvious.

Thus, claim 3 is rejected.

As to claim 4, the limitations concerning discharge frequency and discharge amount are product-by-process limitations and are not considered.

Patentability does not rest merely upon the process by which the optical compensating film is made. Rather it must be the optical compensating film itself that is new, useful and not obvious.

Thus, claim 4 is rejected.

As to claims 5, 12, 15 and 16, the adhesive is an acrylic adhesive (Takahashi, See Claim 1 Rejection above).

Thus, claims 5, 12, 15 and 16 are rejected.

As to claims 6 and 13, Takahashi teaches that the thickness of the norbornene resin sheet may range from 50-500 μm (Column 4, Lines 29-30).

Thus, claims 6 and 13 are rejected.

As to claims 7 and 14 (both amended), Takahashi teaches and discloses draw ratios for the norbornene resin sheet (Id. at Column 4, Lines 50-56)(Please see Claim Objections above).

Thus, claims 7 and 14 are rejected.

As to claim 8 (amended), Takahashi teaches and discloses a thermoplastic saturated norbornene resin phase plate for liquid crystal displays and the like in which a thermoplastic saturated norbornene resin sheet is stretched and oriented (Abstract, entire patent, Column 3, Lines 65-67 and Column 4, Lines 3-4). Several layers become laminated (Column 5, Lines 48-51) and an adhesive, such as an acrylic adhesive is used for the lamination (Id. at Lines 52-65). Several layers are laminated, thus, it may be presumed that the adhesive has an adhesive property on its both surfaces.

Takahashi also teaches that the phase plate may be adhered onto a polarizing plate (Column 5, Lines 52-65).

Takahashi does not appear to explicitly specify the adhesive strength between the adhesive and the stretched norbornene resin sheet.

However, Matsui teaches and discloses a bonding of a thermoplastic norbornene resin with respect to an adhesive (Entire Application but see also "Effect of the Invention" at page 5 of 5 of the machine translation at [0042]). Matsui states that the adhesive strength between the thermoplastic norbornene resin and adhesive layer is strong and as such Matsui obtains a good adhesive property. (Id.).

Matsui is evidence that ordinary workers in the field of liquid crystals would have found the reason, suggestion and motivation to maximize and optimize the bonding strength (or adhesive force) between a norbornene resin sheet and an adhesive layer for good adhesive

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properties especially if the laminate is to be used in the context of liquid crystal displays or polarizers where optical evenness becomes critical.

Therefore, it would have been obvious to one of ordinary skill in the art of liquid crystals at the time the invention was made to modify Takahashi in view of Matsui for good adhesive properties especially if the laminate is to be used in the context of liquid crystal displays or polarizers where optical evenness becomes critical.

Thus, claim 8 is rejected.

As to claim 9 (amended), Takahashi teaches and discloses a thermoplastic saturated norbornene resin phase plate for liquid crystal displays and the like in which a thermoplastic saturated norbornene resin sheet is stretched and oriented (Abstract, entire patent, Column 3, Lines 65-67 and Column 4, Lines 3-4). Several layers become laminated (Column 5, Lines 48-51) and an adhesive, such as an acrylic adhesive is used for the lamination (Id. at Lines 52-65). Several layers are laminated, thus, it may be presumed that the adhesive has an adhesive property on its both surfaces.

Takahashi also teaches that the phase plate may be incorporated into a liquid crystal display (Column 5, Lines 52-65). Takahashi also teaches that the phase plate may be adhered to a polarizer (Id.).

Takahashi does not appear to explicitly specify the adhesive strength between the adhesive and the stretched norbornene resin sheet.

However, Matsui teaches and discloses a bonding of a thermoplastic norbornene resin with respect to an adhesive (Entire Application but see also "Effect of the Invention" at page 5 of 5 of the machine translation at [0042]). Matsui states that the adhesive strength between the

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thermoplastic norbornene resin and adhesive layer is strong and as such Matsui obtains a good adhesive property. (Id.).

Matsui is evidence that ordinary workers in the field of liquid crystals would have found the reason, suggestion and motivation to maximize and optimize the bonding strength (or adhesive force) between a norbornene resin sheet and an adhesive layer for good adhesive properties especially if the laminate is to be used in the context of liquid crystal displays or polarizers where optical evenness becomes critical.

Therefore, it would have been obvious to one of ordinary skill in the art of liquid crystals at the time the invention was made to modify Takahashi in view of Matsui for good adhesive properties especially if the laminate is to be used in the context of liquid crystal displays or polarizers where optical evenness becomes critical.

Thus, claim 9 is rejected.

As to claim 10, the method for producing an optical compensating film would have been obvious in view of the device as taught and disclosed by Takahashi in view of Matsui.

Thus, claim 10 is rejected.

As to claims 17-20, the adhesive of Takahashi is disposed directly on the norbornene-based resin film as noted.

Thus, claims 17-20 are rejected.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent 5,543,948 (to Takahashi et al.) in view of Japanese Patent Application 05-086211 (to Matsui et al.) and further in view of United States Patent 5,725,960 (to Konishi et al.).

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As to claim 11, Takahashi does not appear to explicitly specify a corona discharge surface treatment.

Konishi teaches and discloses molded articles having a hard coat layer and a production method (Title, entire patent). Konishi teaches modifying the surface of a thermoplastic norbornene resin to obtain a given surface tension (Id.). The surface of the norbornene resin is treated by a corona discharge treatment because it is an efficient treatment (Column 3, Lines 55-67 and Column 4, Lines 1-5).

Konishi is evidence that ordinary workers in the field of liquid crystals would have found the reason, suggestion and motivation to treat a surface of a norbornene resin film via corona discharge treatment not only to improve surface tension but also because corona discharge is efficient.

Therefore, it would have been obvious to one of ordinary skill in the art of liquid crystals at the time the invention was made to modify Takahashi in view of Konishi for efficiency and improved surface tension.

Thus, claim 11 is rejected.

Response to Arguments

Applicant's arguments filed September 8, 2005 have been fully considered but they are not persuasive.

The Examiner thanks Applicant's Representative for the Partial Translation from the Handbook of Adhesion submitted along with Remarks filed on September 8, 2005.

As best understood by the Examiner, Applicant argues that the adhesive strength of the norbornene film of the Matsui reference relates to that of a primer layer and not an adhesive layer and that a primer layer is not the same thing as an adhesive layer.

The Examiner responds as follows:

It is respectfully noted that Applicant's open-ended "comprising" preamble does not exclude other materials.

It is also noted that once several layers are laminated together, there is an overall adhesive strength of the combined laminated layers.

The Examiner also notes a related reference, presented for illustration purposes, United States Patent 5,310,439 (to Matsui et al.)(involving a process for bonding a molded article of a thermoplastic saturated norbornene resin).

In this patent, a primer may or may not be used to facilitate adhesion between an adhesive layer and norbornene film. Adhesive strength between the adhesive layer and norbornene film was notably high and resisted deterioration upon change in temperature (Examples and Column 13, Lines 45-55).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeanne A. Di Grazio whose telephone number is (571)272-2289.

The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jeanne Andrea Di Grazio
Patent Examiner
Art Unit 2871

JDG


ANDREW SCHECHTER
PRIMARY EXAMINER